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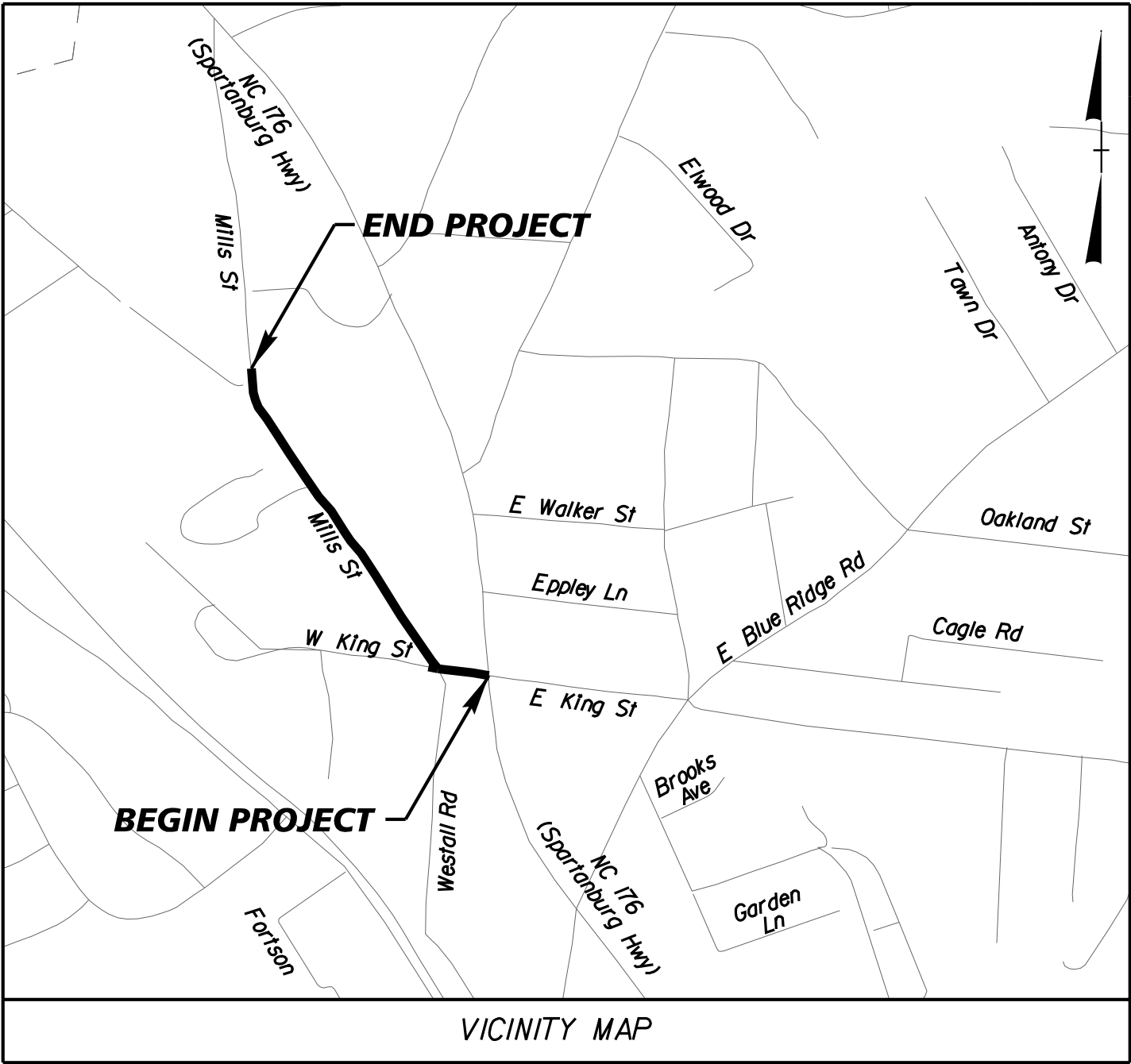
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09/08/199

WBS PROJECT: 47417

CONTRACT: DN00632

5/14/2018



Note: Not to Scale

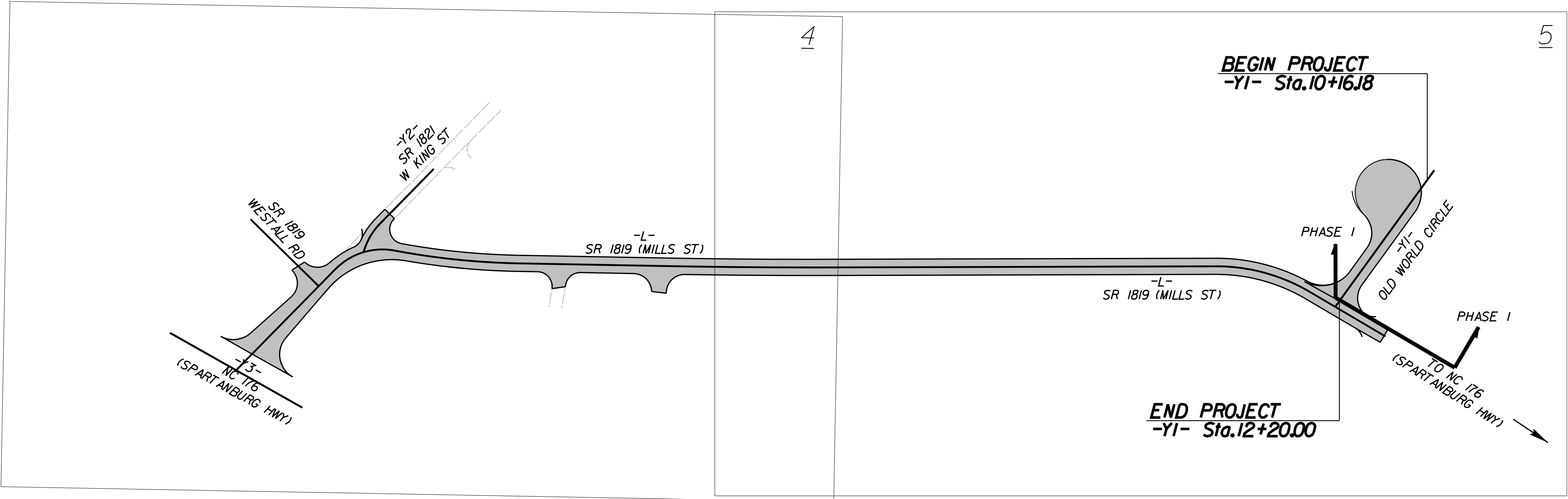
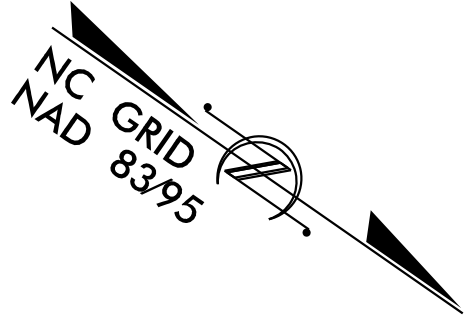
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

HENDERSON COUNTY

LOCATION: FROM THE INTERSECTION OF SR 1819 (MILLS STREET)
AND OLD WORLD CIRCLE, FOR APPROX. 200 FEET
ALONG OLD WORLD CIRCLE

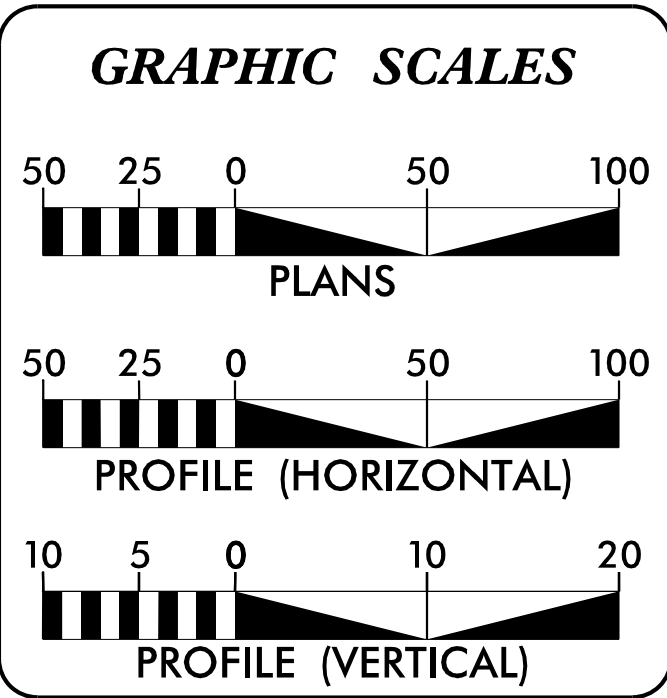
TYPE OF WORK: GRADING, PAVING, DRAINAGE

PROJECT PHASING: PHASE I CONSTRUCTION, -Y1- OLD WORLD CIRCLE UP TO
BUT NOT INCLUDING THE FINAL SURFACE COURSE



CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II

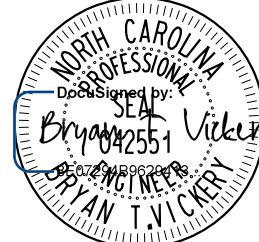
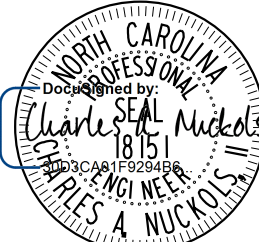
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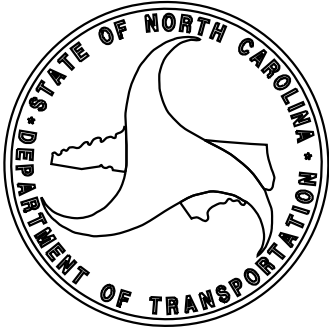


DESIGN DATA
SR 1819 (MILLS ST)
V = 30 MPH

PROJECT LENGTH
TOTAL LENGTH OF SR 1819 (MILLS ST) = 0.30 MILES
TOTAL LENGTH OF ROADWAY CONSTRUCTION = 0.30 MILES

PLANS PREPARED FOR THE NCDOT BY:	Kimley »Horn
2018 STANDARD SPECIFICATIONS	CHARLES NUCKOLS, P.E. PROJECT ENGINEER
RIGHT OF WAY DATE:	5/9/2018 CALEB LOWMAN, E.I. PROJECT DESIGN ENGINEER
LETTING DATE:	STEVE CANNON, P.E. DIVISION 14 DISTRICT ENGINEER

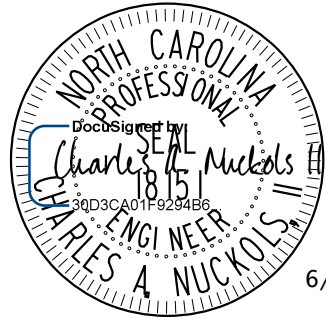
HYDRAULICS ENGINEER	
	5/9/2018 <u>P.E.</u>
<u>SIGNATURE:</u>	
ROADWAY DESIGN ENGINEER	
	5/9/2018 <u>P.E.</u>
<u>SIGNATURE:</u>	



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.	SHEET NO.
011036406	1A

ROADWAY DESIGN
ENGINEER



6/5/2018

INDEX OF SHEETS	
SHEET NUMBER	SHEET
I	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARDS
1B	CONVENTIONAL SYMBOLS
1C-1	SURVEY CONTROL SHEET
2A-1	TYPICAL SECTIONS, PAVEMENT SCHEDULE, AND MISCELLANEOUS DETAILS
2C-1	GUARDRAIL INSTALLATION
2D-1	DRAINAGE DETAILS
3B-1	SUMMARY OF GUARDRAIL
3D-1 THRU 3D-2 4 THRU 5 6	SUMMARY OF DRAINAGE QUANTITIES PLAN SHEETS PROFILE SHEETS
TMP-1 THRU TMP-2	TRANSPORTATION MANAGEMENT PLANS
PMP-1 THRU PMP-4	PAVEMENT MARKING PLANS
SIGN-1 THRU SIGN-5	SIGNING PLANS
EC-1 THRU EC-4	EROSION CONTROL PLANS
X-0	CROSS SECTION INDEX
X-1 THRU X-9	CROSS SECTIONS

GENERAL NOTES

2018 SPECIFICATIONS

EFFECTIVE: 07-01-17

GRADE LINE:
GRADING AND SURFACING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING AND ENDING AND AT STRUCTURES AS DIRECTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II, IN AREAS WITH PERMANENT UTILITY EASEMENTS, CLEARING SHALL EXTEND TO THE RIGHT-OF-WAY LIMITS.

SUPERELEVATION:

ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 AND/OR 225.05 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

DRIVEWAYS:

DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.02 USING 3' RADIUS OR RADIUS AS SHOWN ON THE PLANS. LOCATIONS OF DRIVES WILL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

SHOULDER CONSTRUCTION:

ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.02.

SIDE ROADS:

THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THE PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.

STREET TURNOUT:

STREET RETURNS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 848.04 USING THE RADIUS NOTED ON THE PLANS.

GUARDRAIL:

THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIAL.

UTILITIES:

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON PLANS.

THE CONTRACTOR'S ATTENTION IS DIRECTED TO SECTION 840 OF THE 2018 STANDARD SPECIFICATIONS. PROVIDE A FRAME AND COVER WITH THE COVER BOLTED INTO THE FRAME. PROVIDE 2 3/8" STAINLESS STEEL BOLTS FOR EACH FRAME WITH COVER THAT MEET THE REQUIREMENTS OF SEC. 1072-5 OF THE 2018 STANDARD SPECIFICATIONS

LIST OF ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AND ANY OTHER APPLICABLE STANDARDS WITHIN THE "ROADWAY STANDARD DRAWINGS" HIGHWAY DESIGN BRANCH-N.C. DEPARTMENT OF TRANSPORTATION RALEIGH, N.C., DATED JANUARY 2018 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	DESCRIPTION
200.02	METHOD OF CLEARING - METHOD II
225.02	GUIDE FOR GRADING SUBGRADE - SECONDARY AND LOCAL
225.04	METHOD OF OBTAINING SUPERELEVATION - TWO LANE PAVEMENT
225.06	METHOD OF GRADING SIGHT DISTANCE AT INTERSECTIONS
300.01	METHOD OF PIPE INSTALLATION
560.02	METHOD OF SHOULDER CONSTRUCTION - HIGH SIDE OF SUPERELEVATED CURVE - METHOD II
654.01	PAVEMENT REPAIRS
840.00	CONCRETE BASE PAD FOR DRAINAGE STRUCTURES
840.01	BRICK CATCH BASIN - 12" THRU 54" PIPE
840.02	CONCRETE CATCH BASIN - 12" THRU 54" PIPE
840.03	FRAME, GRATES, AND HOOD - FOR USE ON STANDARD CATCH BASIN
840.14	CONCRETE DROP INLET - 12" THRU 30" PIPE
840.15	BRICK DROP INLET - 12" THRU 30" PIPE
840.16	DROP INLET FRAME AND GRATES - FOR USE WITH STD. DWG 840.14 AND 840.15
840.18	CONCRETE GRATED DROP INLET TYPE 'B' - 12" THRU 36" PIPE
840.24	FRAMES AND NARROW SLOT SAG GRATES
840.25	ANCHORAGE FOR FRAMES - BRICK, CONCRETE, OR PRECAST
840.27	BRICK GRATED DROP INLET TYPE 'B' - 12" THRU 36" PIPE
840.31	CONCRETE JUNCTION BOX - 12" THRU 66" PIPE
840.32	BRICK JUNCTION BOX - 12" THRU 66" PIPE
840.34	TRAFFIC BEARING JUNCTION BOX - FOR USE WITH PIPES 42" AND UNDER
840.45	PRECAST DRAINAGE STRUCTURE
840.54	MANHOLE FRAME AND COVER
840.66	DRAINAGE STRUCTURE STEPS
840.71	CONCRETE AND BRICK PIPE PLUG
846.01	CONCRETE CURB, GUTTER AND CURB AND GUTTER
848.02	DRIVEWAY TURNOUT - RADIUS TYPE
848.04	STREET TURNOUT - RADIUS TYPE
848.05	CURB RAMP - PROPOSED CURB & GUTTER
862.01	GUARDRAIL PLACEMENT
862.02	GUARDRAIL INSTALLATION (USE DETAIL 2C-1 IN LIEU OF SHEET 6 OF 8)
876.01	RIP RAP IN CHANNELS
876.02	GUIDE FOR RIP RAP AT PIPE OUTLETS
876.04	DRAINAGE DITCHES WITH CLASS 'B' RIP RAP

REVISIONS

6/5/2018

REVISIONS

5/9/2018

BOUNDARIES AND PROPERTY:

State Line	
County Line	
Township Line	
City Line	
Reservation Line	
Property Line	
Existing Iron Pin	
Property Corner	
Property Monument	
Parcel/Sequence Number	
Existing Fence Line	
Proposed Woven Wire Fence	
Proposed Chain Link Fence	
Proposed Barbed Wire Fence	
Existing Wetland Boundary	
Proposed Wetland Boundary	
Existing Endangered Animal Boundary	
Existing Endangered Plant Boundary	
Existing Historic Property Boundary	
Known Contamination Area: Soil	
Potential Contamination Area: Soil	
Known Contamination Area: Water	
Potential Contamination Area: Water	
Contaminated Site: Known or Potential	

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	
Sign	
Well	
Small Mine	
Foundation	
Area Outline	
Cemetery	
Building	
School	
Church	
Dam	

HYDROLOGY:

Stream or Body of Water	
Hydro, Pool or Reservoir	
Jurisdictional Stream	
Buffer Zone 1	
Buffer Zone 2	
Flow Arrow	
Disappearing Stream	
Spring	
Wetland	
Proposed Lateral, Tail, Head Ditch	
False Sump	

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS
CONVENTIONAL PLAN SHEET SYMBOLS
Note: Not to Scale *S.U.E. = Subsurface Utility Engineering

RAILROADS:

Standard Gauge	
RR Signal Milepost	
Switch	
RR Abandoned	
RR Dismantled	

RIGHT OF WAY:

Baseline Control Point	
Existing Right of Way Marker	
Existing Right of Way Line	
Proposed Right of Way Line	
Proposed Right of Way Line with Iron Pin and Cap Marker	
Proposed Right of Way Line with Concrete or Granite R/W Marker	
Proposed Control of Access Line with Concrete C/A Marker	
Existing Control of Access	
Proposed Control of Access	
Existing Easement Line	
Proposed Temporary Construction Easement	
Proposed Temporary Drainage Easement	
Proposed Permanent Drainage Easement	
Proposed Permanent Drainage / Utility Easement	
Proposed Permanent Utility Easement	
Proposed Temporary Utility Easement	
Proposed Aerial Utility Easement	
Proposed Permanent Easement with Iron Pin and Cap Marker	

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	
Existing Curb	
Proposed Slope Stakes Cut	
Proposed Slope Stakes Fill	
Proposed Curb Ramp	
Existing Metal Guardrail	
Proposed Guardrail	
Existing Cable Guiderail	
Proposed Cable Guiderail	
Equality Symbol	
Pavement Removal	
VEGETATION:	
Single Tree	
Single Shrub	
Hedge	
Woods Line	
Orchard	
Vineyard	

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	
Bridge Wing Wall, Head Wall and End Wall	
MINOR:	
Head and End Wall	
Pipe Culvert	
Footbridge	
Drainage Box: Catch Basin, DI or JB	
Paved Ditch Gutter	
Storm Sewer Manhole	
Storm Sewer	

UTILITIES:

POWER:	
Existing Power Pole	
Proposed Power Pole	
Existing Joint Use Pole	
Proposed Joint Use Pole	
Power Manhole	
Power Line Tower	
Power Transformer	
U/G Power Cable Hand Hole	
H-Frame Pole	
U/G Power Line LOS B (S.U.E.*)	
U/G Power Line LOS C (S.U.E.*)	
U/G Power Line LOS D (S.U.E.*)	

TELEPHONE:

Existing Telephone Pole	
Proposed Telephone Pole	
Telephone Manhole	
Telephone Pedestal	
Telephone Cell Tower	
U/G Telephone Cable Hand Hole	
U/G Telephone Cable LOS B (S.U.E.*)	
U/G Telephone Cable LOS C (S.U.E.*)	
U/G Telephone Cable LOS D (S.U.E.*)	
U/G Telephone Conduit LOS B (S.U.E.*)	
U/G Telephone Conduit LOS C (S.U.E.*)	
U/G Telephone Conduit LOS D (S.U.E.*)	
U/G Fiber Optics Cable LOS B (S.U.E.*)	
U/G Fiber Optics Cable LOS C (S.U.E.*)	
U/G Fiber Optics Cable LOS D (S.U.E.*)	
WATER:	
Water Manhole	
Water Meter	
Water Valve	

Water Hydrant	
U/G Water Line LOS B (S.U.E.*)	
U/G Water Line LOS C (S.U.E.*)	
U/G Water Line LOS D (S.U.E.*)	
Above Ground Water Line	

TV:	
TV Pedestal	
TV Tower	
U/G TV Cable Hand Hole	
U/G TV Cable LOS B (S.U.E.*)	
U/G TV Cable LOS C (S.U.E.*)	
U/G TV Cable LOS D (S.U.E.*)	
U/G Fiber Optic Cable LOS B (S.U.E.*)	
U/G Fiber Optic Cable LOS C (S.U.E.*)	
U/G Fiber Optic Cable LOS D (S.U.E.*)	

GAS:

Gas Valve	
Gas Meter	
U/G Gas Line LOS B (S.U.E.*)	
U/G Gas Line LOS C (S.U.E.*)	
U/G Gas Line LOS D (S.U.E.*)	
Above Ground Gas Line	

SANITARY SEWER:

Sanitary Sewer Manhole	
Sanitary Sewer Cleanout	
U/G Sanitary Sewer Line	
Above Ground Sanitary Sewer	
SS Forced Main Line LOS B (S.U.E.*)	
SS Forced Main Line LOS C (S.U.E.*)	
SS Forced Main Line LOS D (S.U.E.*)	

MISCELLANEOUS:

Utility Pole	
Utility Pole with Base	
Utility Located Object	
Utility Traffic Signal Box	
Utility Unknown U/G Line LOS B (S.U.E.*)	
U/G Tank; Water, Gas, Oil	
Underground Storage Tank, Approx. Loc.	
A/G Tank; Water, Gas, Oil	
Geoenvironmental Boring	
U/G Test Hole LOS A (S.U.E.*)	
Abandoned According to Utility Records	
End of Information	

PROJECT REFERENCE NO.
011036406

SHEET NO.
1B

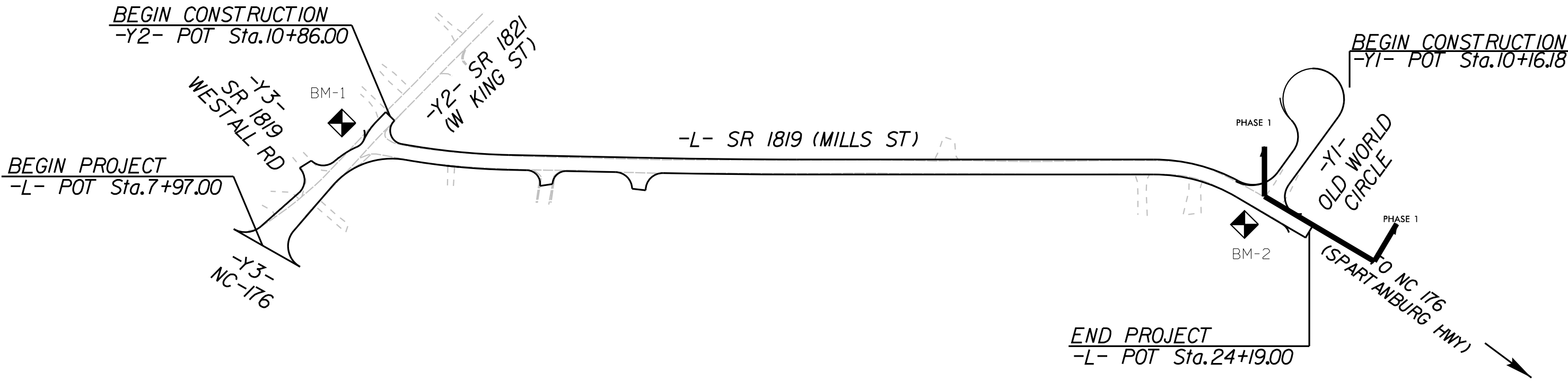
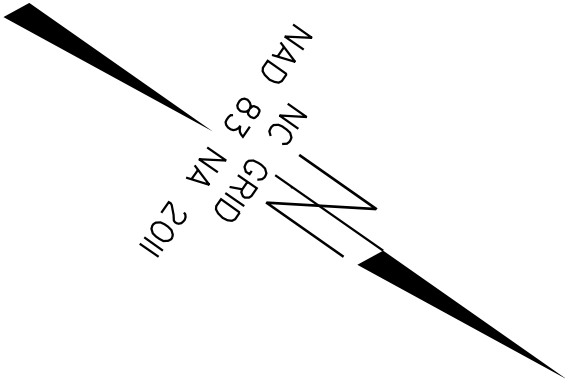
ROADWAY DESIGN
ENGINEER

5/10/2018

6/2/99

PROJECT REFERENCE NO.	SHEET NO.
011036406	1C-1
LOCATION AND SURVEYS	

SURVEY CONTROL SHEET WBS-47417



BASELINE DATA

BL	POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
	1	BL-1	575488.3210	978435.1080	320.89	9+92.27	21.86 LT
	2	BL-2	575785.6910	978283.3240	317.78	13+16.62	12.61 RT
	3	BL-3	576117.4150	978055.4670	326.64	17+18.92	11.58 RT
	4	BL-4	576560.3170	977733.1610	302.68	22+60.69	13.30 LT

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY BY NCDOT FOR MONUMENT "G102"
WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF NORTHING: 575999.6720(±), EASTING: 978569.9000(±), ELEVATION: 2187.79(±)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999773145
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "G102" TO -L- STATION 13+35.37 IS N 56°13'05"E 369.95'
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

GEOID G12ANC

NOTE: DRAWING NOT TO SCALE

BENCHMARK DATA

.....
BM1 ELEVATION = 2204.89'
N 575461 E 978422
BL STATION 5+00.00
N 25° 32' 55" E DISTANCE 30.48'
8" SPIKE SET IN THE ROOT OF A 24' WHITE PINE TREE STUMP
.....
BM2 ELEVATION = 2175.31'
N 576636 E 977782
BL STATION 18+00.37
S 41° 02' 23" E DISTANCE 73.93'
8" SPIKE SET IN THE ROOT OF A 36' WALNUT TREE
.....

NOTES:

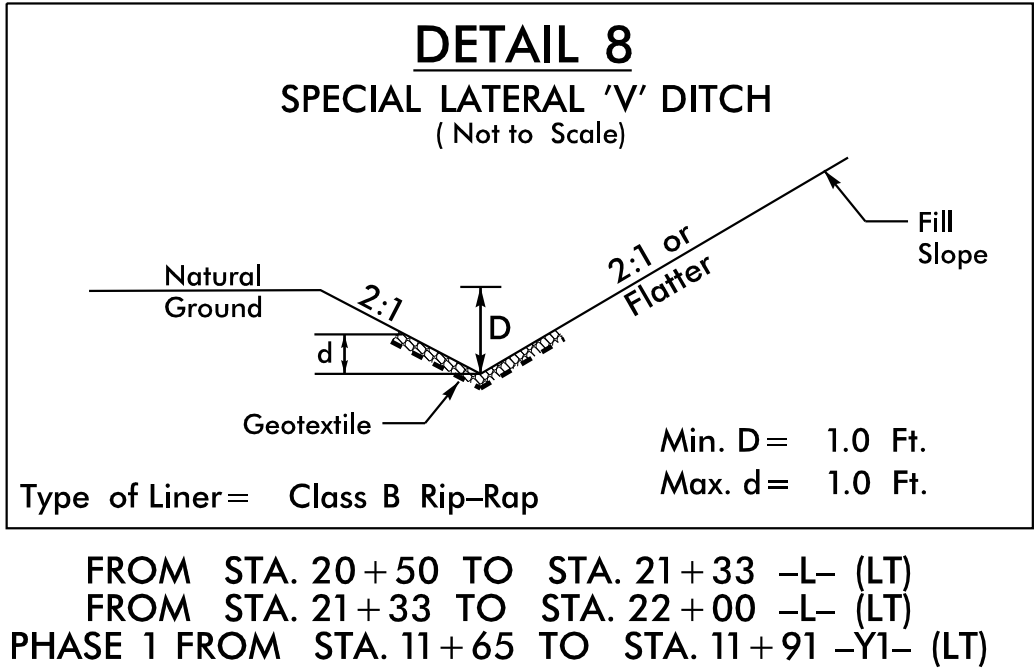
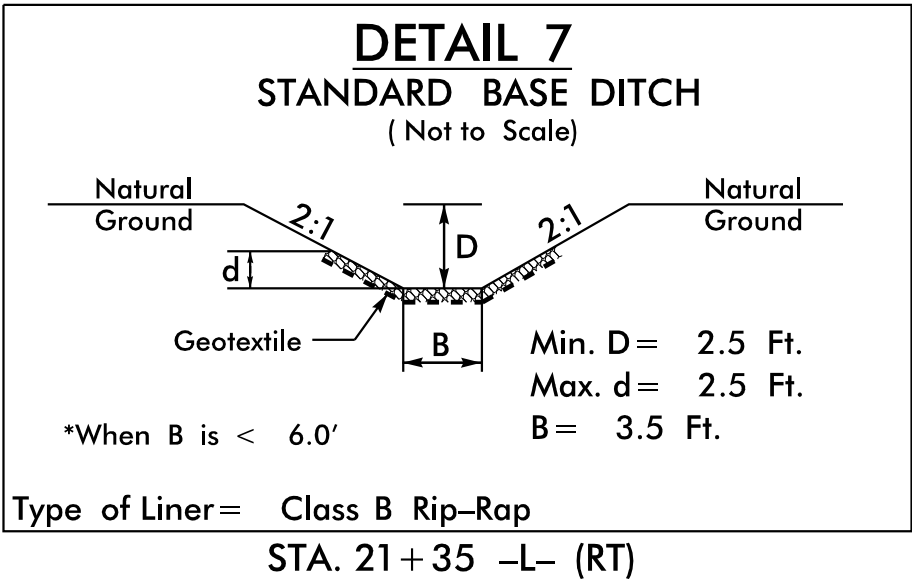
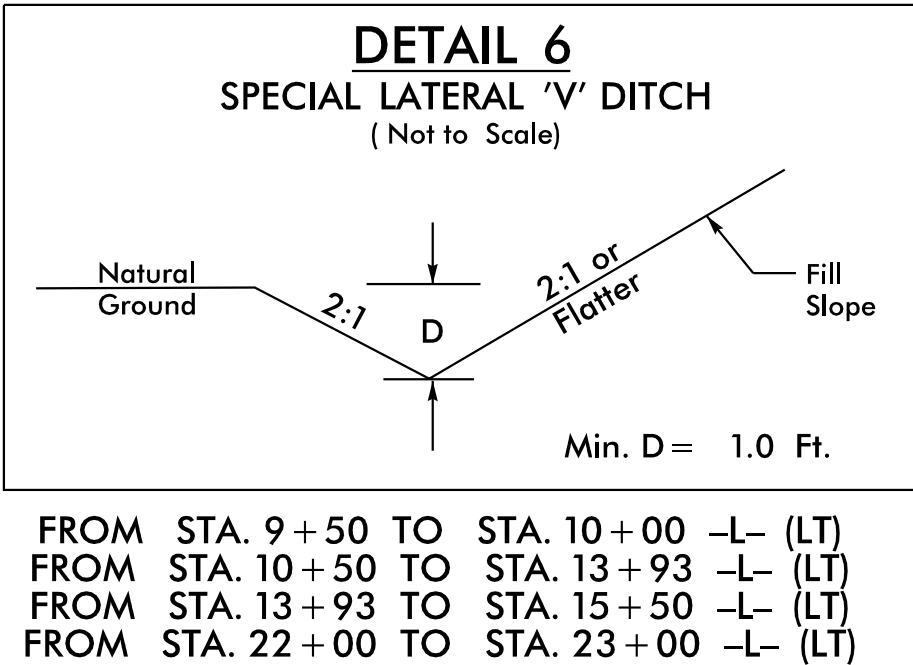
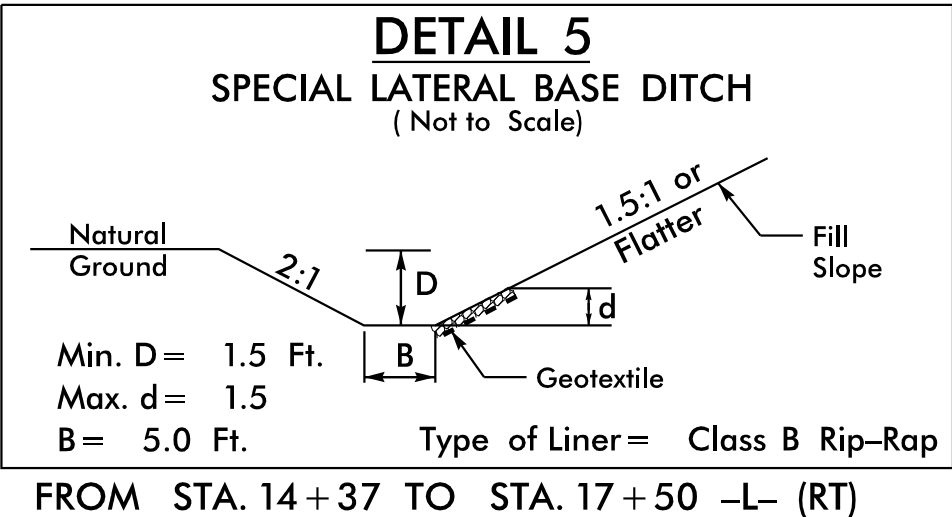
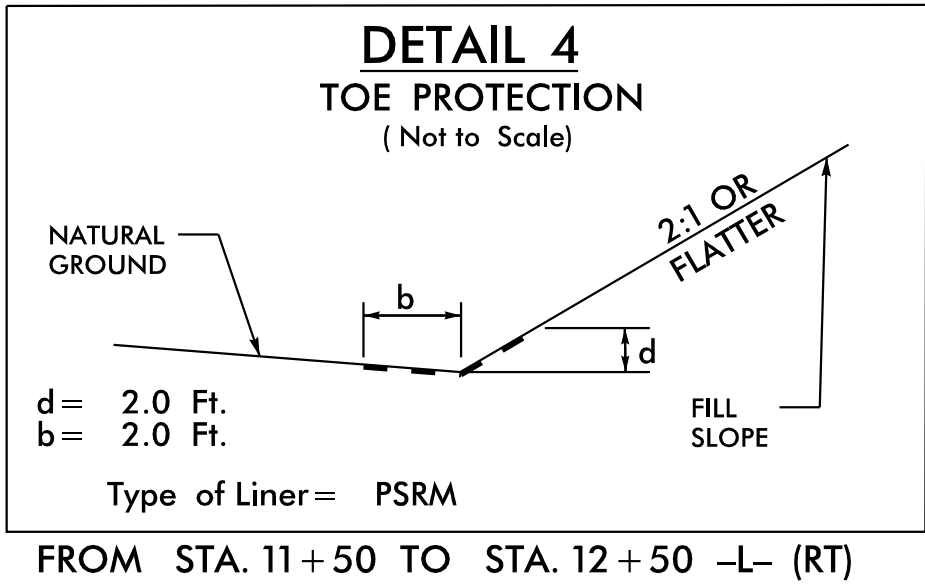
SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

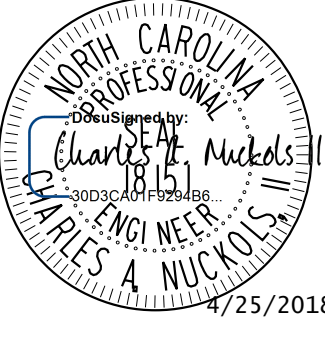
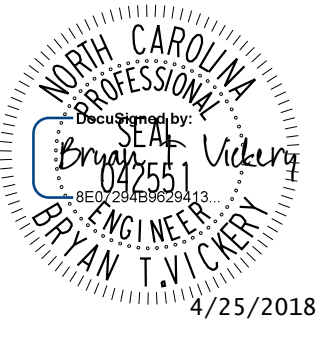
6/2/99

6/2/99

5/14/99

4/24/2018



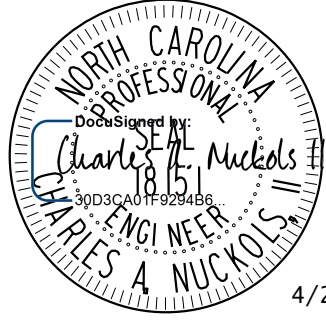
Kimley » Horn ©2017		PROJECT REFERENCE NO. 011036406		SHEET NO. 2D-1	
21 FAYETTEVILLE ST, SUITE 600 ALBANY, N.C. 27601		ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
1ST-OF-WAY REV.					
2ND-OF-WAY REV.		4/25/2018			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED					

5/14/99

COMPUTED BY:	C. LOWMAN	DATE:	9/05/2017
CHECKED BY:	C. NUCKOLS	DATE:	9/05/2017

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

Kimley»Horn
421 FAYETTEVILLE ST, SUITE 600
RALEIGH, N.C. 27601



4/25/2018

PROJECT REFERENCE NO.
011036406

SHEET NO.
3B-1

R/W SHEET NO.

ROADWAY DESIGN
ENGINEER

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL.
TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.
W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.
G = GATING IMPACT ATTENUATOR TYPE TL-2
NG = NON-GATING IMPACT ATTENUATOR TYPE TL-2

GUARDRAIL SUMMARY

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOULDER WIDTH	FLARE LENGTH		W		ANCHORS		REMARKS
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	APPROACH END	TRAILING END	GREU TL-2		
-L-	14 + 55.00	17 + 80.00	RT	325'			14 + 80.00	17 + 55.00	2'	4'	25'	25'	1'	1'	2		
			SUBTOTAL	325'											2		
			LESS ANCHOR DEDUCTIONS														
	GREU TL-3	2 @ 50'	=	50'													
			TOTAL	275'													
			SAY	275'													
ADDITIONAL GUARDRAIL POSTS = 5 EA																	

4/24/2018

SHEET TOTALS

5/14/99

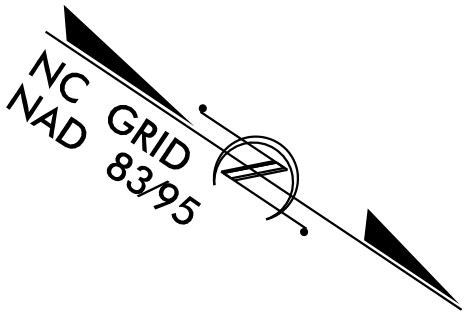
4/24/2018

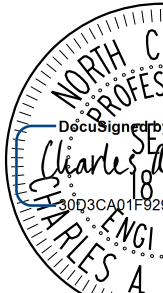
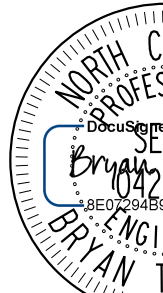
-L-			
PI Sta 10+07.13	PI Sta 11+32.13	PI Sta 15+34.83	PI Sta 22+35.37
$\Delta = 56^{\circ}16'33.1''$ (RT)	$\Delta = 9^{\circ}41'10.6''$ (LT)	$\Delta = 1^{\circ}12'54.1''$ (LT)	$\Delta = 30^{\circ}37'16.3''$ (RT)
D = 63°39'43.1"	D = 5°43'46.5"	D = 0°34'22.6"	D = 22°55'05.9"
L = 88.40'	L = 169.06'	L = 212.06'	L = 133.61'
T = 48.13'	T = 84.73'	T = 106.03'	T = 68.44'
R = 90.00'	R = 1,000.00'	R = 10,000.00'	R = 250.00'

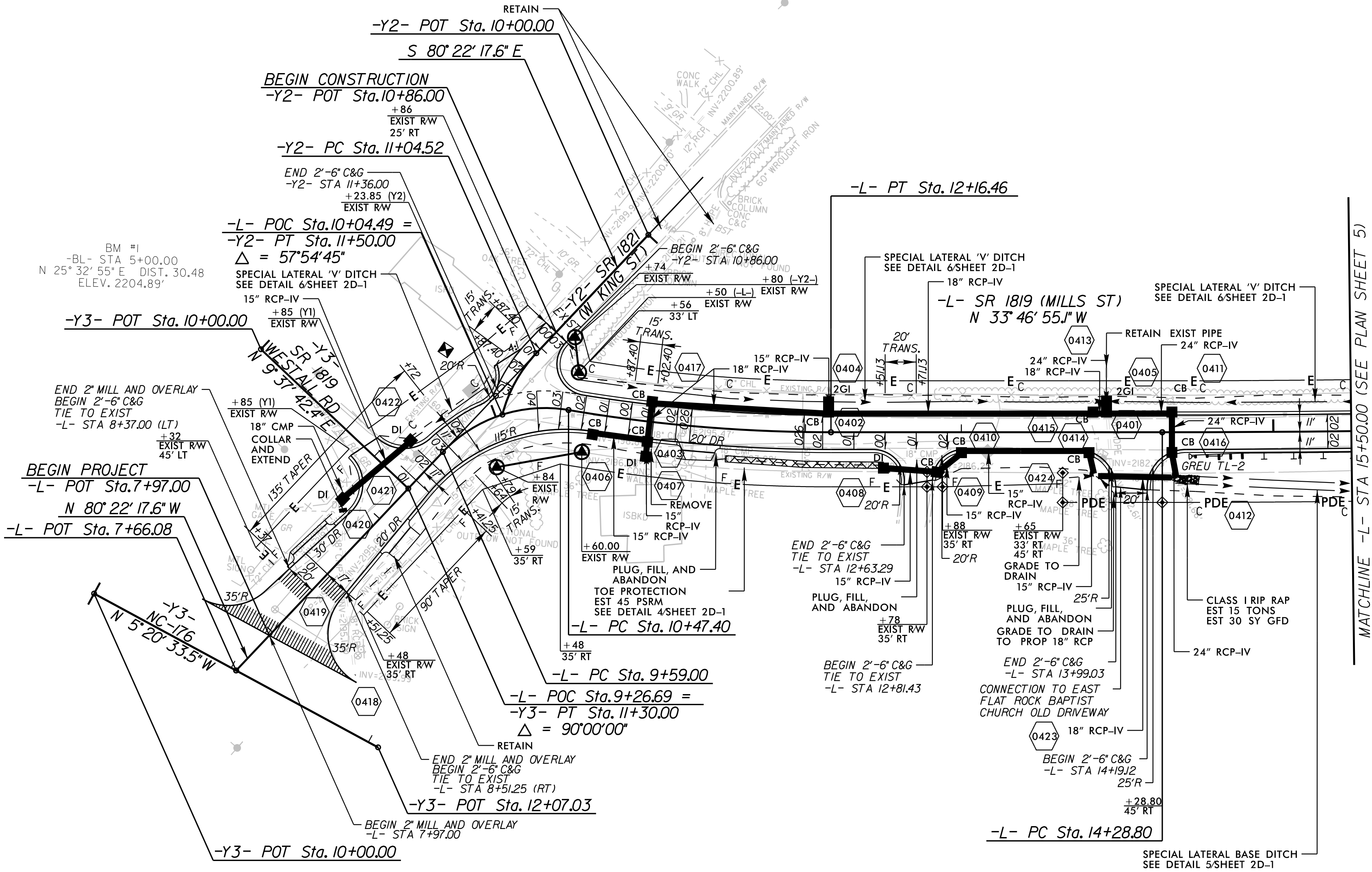
-Y2-	
PI Sta 11+27.76	
$\Delta = 28^{\circ}57'22.4''$ (LT)	
D = 63°39'43.1"	
L = 45.48'	
T = 23.24'	
R = 90.00'	

Kimley»Horn

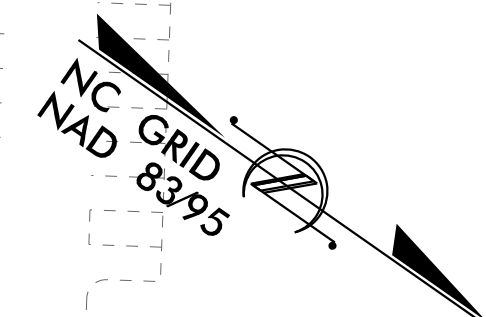
421 FAYETTEVILLE ST, SUITE 600
RALEIGH, N.C. 27601



PROJECT REFERENCE NO.		SHEET NO.	
011036406		4	
R/W SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
			
4/25/2018			
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



SEE SHEET 6 FOR -L- PROFILE
SEE SHEET 6 FOR -Y2- PROFILE



SEE SHEET 6 FOR -L- PROFILE
SEE SHEET 6 FOR -YI- PROFILE

5/14/99

***-L- SR 1819 (MILLS ST) &
-Y2- SR 1821 (W KING ST)***

PHASING NOTES

STEP 1

THE CONTRACTOR SHALL PLACE ALL ADVANCE WARNING SIGNS PRIOR TO BEGINNING WORK ACCORDING TO NCDOT STANDARD DRAWING NO. 1101.01. SIGNS SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETED.

WHILE MAINTAINING EXISTING TRAFFIC AND USING NCDOT STANDARD DRAWING 1101.02 FOR TEMPORARY LANE CLOSURES AS NEEDED, THE CONTRACTOR SHALL CONSTRUCT PROPOSED IMPROVEMENTS ON THE EAST SIDE OF -L- SR 1819 (MILLS ST) & -Y2- SR 1821 (W KING ST) INCLUDING MILLING, PAVEMENT WIDENING, DRAINAGE STRUCTURES AND DITCHES, AND PROPOSED CURB AND GUTTER INSTALLATION, UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE PAVEMENT.

STEP 2

WHILE MAINTAINING EXISTING TRAFFIC AND USING NCDOT STANDARD DRAWING 1101.02 FOR TEMPORARY LANE CLOSURES AS NEEDED, THE CONTRACTOR SHALL CONSTRUCT PROPOSED IMPROVEMENTS ON THE WEST SIDE OF -L- SR 1819 (MILLS ST) & -Y2- SR 1821 (W KING ST) INCLUDING MILLING, PAVEMENT WIDENING, DRAINAGE STRUCTURES AND DITCHES, AND PROPOSED CURB AND GUTTER INSTALLATION, UP TO BUT NOT INCLUDING THE FINAL LAYER OF SURFACE COURSE PAVEMENT.

STEP 3

WHILE MAINTAINING EXISTING TRAFFIC AND USING NCDOT STANDARD DRAWING 1101.02 FOR TEMPORARY LANE CLOSURES AS NEEDED, THE CONTRACTOR SHALL INSTALL THE FINAL ASPHALT SURFACE COURSE, FINAL PAVEMENT MARKINGS, PLACE TRAFFIC ONTO FINAL PATTERN, AND REMOVE ALL TRAFFIC CONTROL DEVICES AND SIGNAGE.

4/24/2018

Kimley»Horn
421 FAYETTEVILLE ST, SUITE 600
RALEIGH, N.C. 27601



4/25/2018

PROJECT REFERENCE NO.
011036406

SHEET NO.
TMP-2

TEMPORARY LANE CLOSURE TRAFFIC PATTERN
(NCDOT STD. 1101.02)

-L- SR 1819 (MILLS ST)
-Y2- SR 1821 (W KING ST)



EXIST PAVEMENT WORK AREA

PHASE 1 CONSTRUCTION

"END OF DAY" TRAFFIC PATTERN

-L- SR 1819 (MILLS ST)
-Y2- SR 1821 (W KING ST)



EXIST PAVEMENT WORK AREA

PHASE 1 CONSTRUCTION

TEMPORARY LANE CLOSURE TRAFFIC PATTERN
(NCDOT STD. 1101.02)

-L- SR 1819 (MILLS ST)
-Y2- SR 1821 (W KING ST)



WORK AREA EXIST PAVEMENT

PHASE 2 CONSTRUCTION

"END OF DAY" TRAFFIC PATTERN

-L- SR 1819 (MILLS ST)
-Y2- SR 1821 (W KING ST)



WORK AREA EXIST PAVEMENT

PHASE 2 CONSTRUCTION

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4/24/2018

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

HENDERSON COUNTY

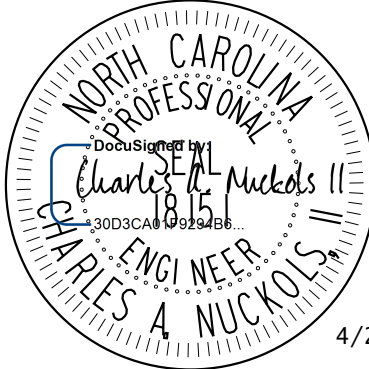
LOCATION: FROM THE INTERSECTION OF WEST KING STREET AND
NC 176 TO APPROX.1600’NORTH TO OLD WORLD CIRCLE
ON SR 1819 (MILLS STREET)

PROJECT REFERENCE NO.
011036406

SHEET NO.
PMP-1

APPROVED: _____
DATE: _____

SEAL



4/25/2018

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INDEX

SHEET NO.	DESCRIPTION
PMP-1	PAVEMENT MARKING PLAN COVER SHEET
PMP-2	N/A
PMP-3 THRU PMP-4	PAVEMENT MARKING DETAILS

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" -
PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C.,
DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE
CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - 2 LANE AND MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - PERMANENT AND TEMPORARY
1261.01	GUARDRAIL AND BARRIER DELINEATOR SPACING
1261.02	GUARDRAIL AND BARRIER DELINEATOR TYPES
1262.01	GUARDRAIL END DELINEATION

PAVEMENT
MARKING SCHEDULE

SYMBOL	DESCRIPTION
UC	THERMOPLASTIC SYMBOLS (90 MILS)
UN	STRAIGHT ARROW YIELD LINE TRIANGLE
TB	THERMOPLASTIC (4", 90 MILS) YELLOW EDGELINE
TI	THERMOPLASTIC (4", 120 MILS)
T8	YELLOW DOUBLE CENTER LINE
T9	WHITE 2' - 6'/SP MINISKIP YELLOW 2' - 6'/SP MINISKIP
TN	THERMOPLASTIC (8", 90 MILS)
TP	WHITE GORELINE YELLOW DIAGONAL
T10	THERMOPLASTIC (12", 120 MILS) WHITE 3' - 3'/SP MINISKIP
T2	THERMOPLASTIC (24", 120 MILS) WHITE STOPBAR
MA	MARKERS
MB	PERMANENT RAISED PERMANENT RAISED

GENERAL NOTES

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF
THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN,
OR DIRECTED BY THE ENGINEER.

A) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE
AS FOLLOWS:

ROAD NAME	MARKING	MARKER
-L-	THERMOPLASTIC	PERMANENT RAISED
-Y1-	THERMOPLASTIC	PERMANENT RAISED
-Y2-	THERMOPLASTIC	PERMANENT RAISED

B) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.

C) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.

D) STOP BAR LOCATION AT NON-SIGNALIZED INTERSECTIONS MAY BE ADJUSTED AS
DIRECTED BY THE ENGINEER.

E) UNLESS OTHERWISE SPECIFIED, HEATED-IN-PLACE THERMOPLASTIC MAY BE USED
IN LIEU OF EXTRUDED THERMOPLASTIC FOR STOP BARS, SYMBOLS, CHARACTERS
AND DIAGONALS. IF HEATED-IN-PLACE IS USED, IT SHALL BE PAID FOR USING
THE EXTRUDED THERMOPLASTIC PAY ITEM.

F) ALL TRAVEL LANES ARE 11' WIDTH UNLESS OTHERWISE NOTED.

PLAN PREPARED BY: Kimley-Horn and Associates

P.O. BOX 3968
RALEIGH, NC 27636
PE NO. F-0102

Charles A. Nuckols P.E.	PROJECT DESIGN ENGINEER
Caleb D. Lowman E.I.	DESIGNER

Kimley»Horn

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RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.

011036406

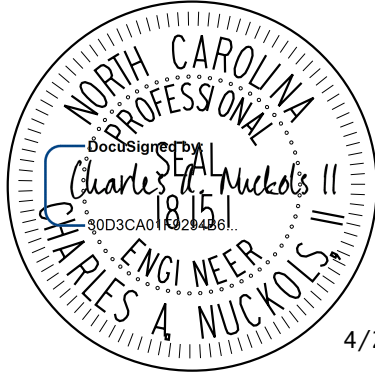
SHEET NO.

PMP-3

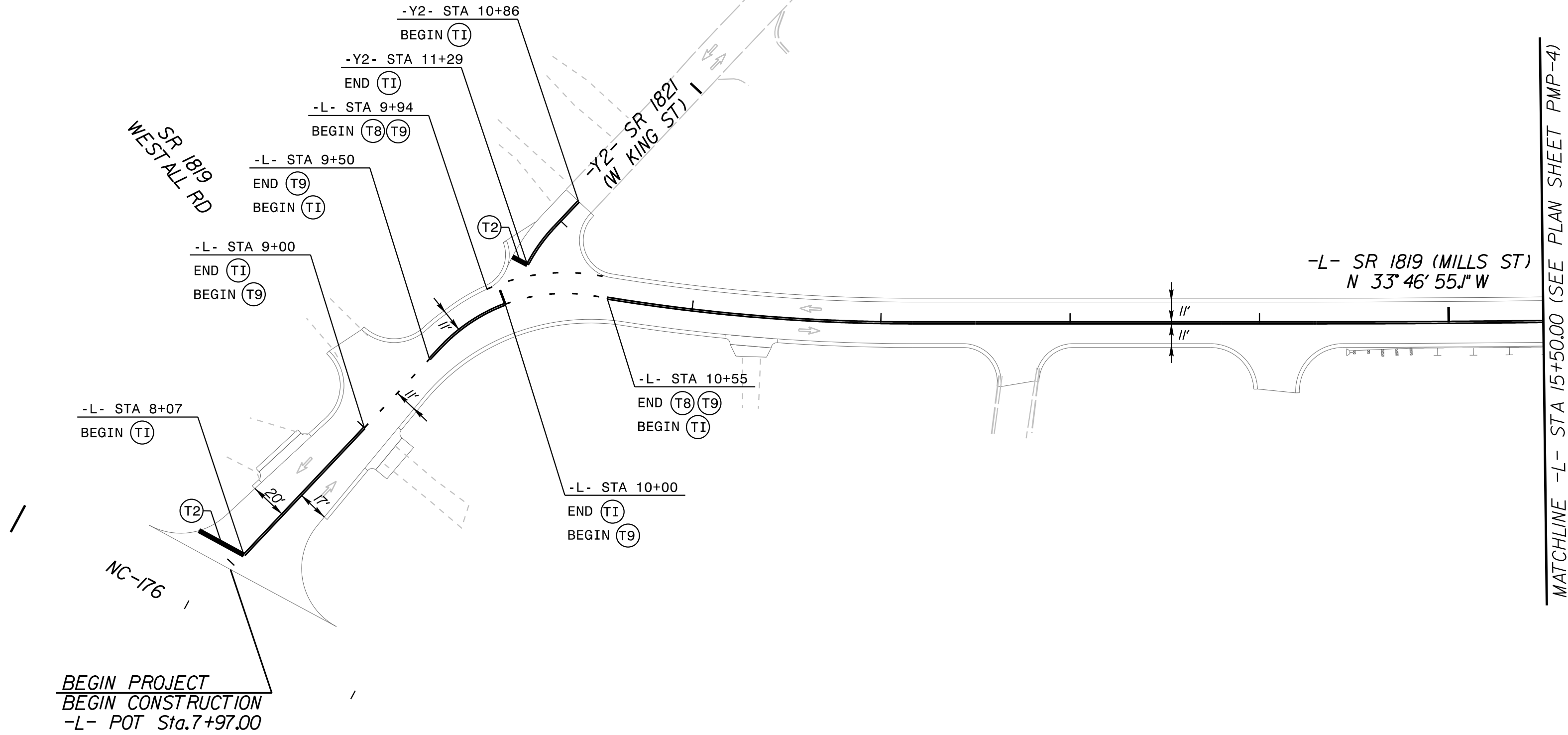
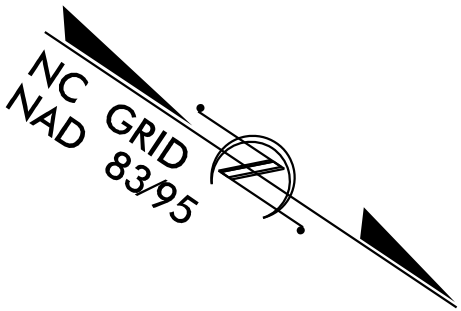
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DATE: _____

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PAVEMENT MARKING LINES

TB - THERMOPLASTIC (4" YELLOW, 90 MILS) EDGELINE
T1 - THERMOPLASTIC (4" YELLOW, 120 MILS) DOUBLE CENTER
TN - THERMOPLASTIC (8" WHITE, 90 MILS) GORELINE
TP - THERMOPLASTIC (8" YELLOW, 90 MILS) DIAGONAL
T2 - THERMOPLASTIC (24" WHITE, 120 MILS) STOP BAR
T8 - THERMOPLASTIC (4" WHITE, 120 MILS) 2' - 6"/SP MINISKIP
T9 - THERMOPLASTIC (4" YELLOW, 120 MILS) 2' - 6"/SP MINISKIP
T10 - THERMOPLASTIC (12" WHITE, 120 MILS) 3' - 3"/SP MINISKIP

PAVEMENT MARKING SYMBOLS

UC - THERMOPLASTIC (STRAIGHT ARROW) (90 MILS)
UN - THERMOPLASTIC (24" YIELD LINE TRIANGLE) (90 MILS)

NOTES:
1. CONTRACTOR TO TIE PROPOSED MARKINGS TO EXISTING MARKINGS AT PROJECT LIMITS.
2. CONTRACTOR SHALL MILL ANY EXISTING MARKINGS OR SYMBOLS IN CONFLICT WITH PROPOSED MARKINGS.
3. RAISED REFLECTIVE PAVEMENT MARKERS ARE TO BE PLACED ACCORDING TO NCDOT ROADWAY STANDARD DRAWINGS.

PAVEMENT MARKER LEGEND

■ - CRYSTAL / RED PAVEMENT MARKER
◆ - YELLOW / YELLOW PAVEMENT MARKER
◀ - DIRECTION OF TRAFFIC FLOW

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PROJECT REFERENCE NO.
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SHEET NO.
PMP-4

APPROVED:

DATE:

SEAL

NORTH CAROLINA

PROFESSIONAL

CHARLES A. NUCKOLS II

REGISTERED

ENGINEER

1815

0000000000

4/25/2018

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UNLESS ALL SIGNATURES COMPLETED

PAVEMENT MARKING LINES

- TB - THERMOPLASTIC (4" YELLOW, 90 MILS) EDGELINE
- TI - THERMOPLASTIC (4" YELLOW, 120 MILS) DOUBLE CENTER
- TN - THERMOPLASTIC (8" WHITE, 90 MILS) GORELINE
- TP - THERMOPLASTIC (8" YELLOW, 90 MILS) DIAGONAL
- T2 - THERMOPLASTIC (24" WHITE, 120 MILS) STOP BAR
- T8 - THERMOPLASTIC (4" WHITE, 120 MILS) 2' - 6"/SP MINISKIP
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NOTES:

- CONTRACTOR TO TIE PROPOSED MARKINGS TO EXISTING MARKINGS AT PROJECT LIMITS.
- CONTRACTOR SHALL MILL ANY EXISTING MARKINGS OR SYMBOLS IN CONFLICT WITH PROPOSED MARKINGS.
- RAISED REFLECTIVE PAVEMENT MARKERS ARE TO BE PLACED ACCORDING TO NCDOT ROADWAY STANDARD DRAWINGS.

PAVEMENT MARKER LEGEND

- - CRYSTAL / RED PAVEMENT MARKER
- ◆ - YELLOW / YELLOW PAVEMENT MARKER
- ⇐ - DIRECTION OF TRAFFIC FLOW

5/14/99

NARRATIVE

Project Description

The North Carolina Department of Transportation proposes to upgrade SR 1819 (Mills St) and SR 1821 (W King St) to a widening project from NC-176 North past the future development and site drive. Approximately 1.44 acres will be disturbed during the construction of this project. Also, approximately 0.88 acres will be vegetatively stabilized with grass and permanent plantings.

The widening project of SR 1819 (Mills St) and SR 1821 (W King St) is located in Henderson County, NC. The project extends approximately 0.30 miles. The proposed curb and gutter typical section will be constructed on an existing two-lane roadway with a four foot berm width extending past the intersection of the new location Site Drive. Contractor shall use WestEd Seed Mix design.

Site Description

The site is generally rolling and contains some drainage ways that are bordered by moderate slopes. Land use along the roadway is partially undeveloped and primarily residential where there's existing development. The majority of the drainage from the project site makes its way through a series of ditches and storm drain systems. All outfalls to the east make their way to unnamed tributaries traveling north and empties into the French Broad River within the French Broad River Basin. No new drainage patterns were introduced. The fill slopes and drainage ditches around the project appear to be stable and do not show signs of significant erosion soils.

Soils

The soil types throughout the project limits are mostly Hayesville loam and sandy loam (TeB, HyC and HyB,).

IMPERVIOUS AND PERVIOUS SURFACES
IN THE DISTURBED AREA

PROPOSED IMPERVIOUS SURFACE = 0.54 AC
PROPOSED PERVIOUS SURFACE = 0.88 AC



DIRECTION OF FLOW



PROJECT DENUDED AREAS

Total Disturbed Area (shaded) = 1.44 acres

PROJECT REFERENCE NO.

011036406

SHEET NO.

EC-1

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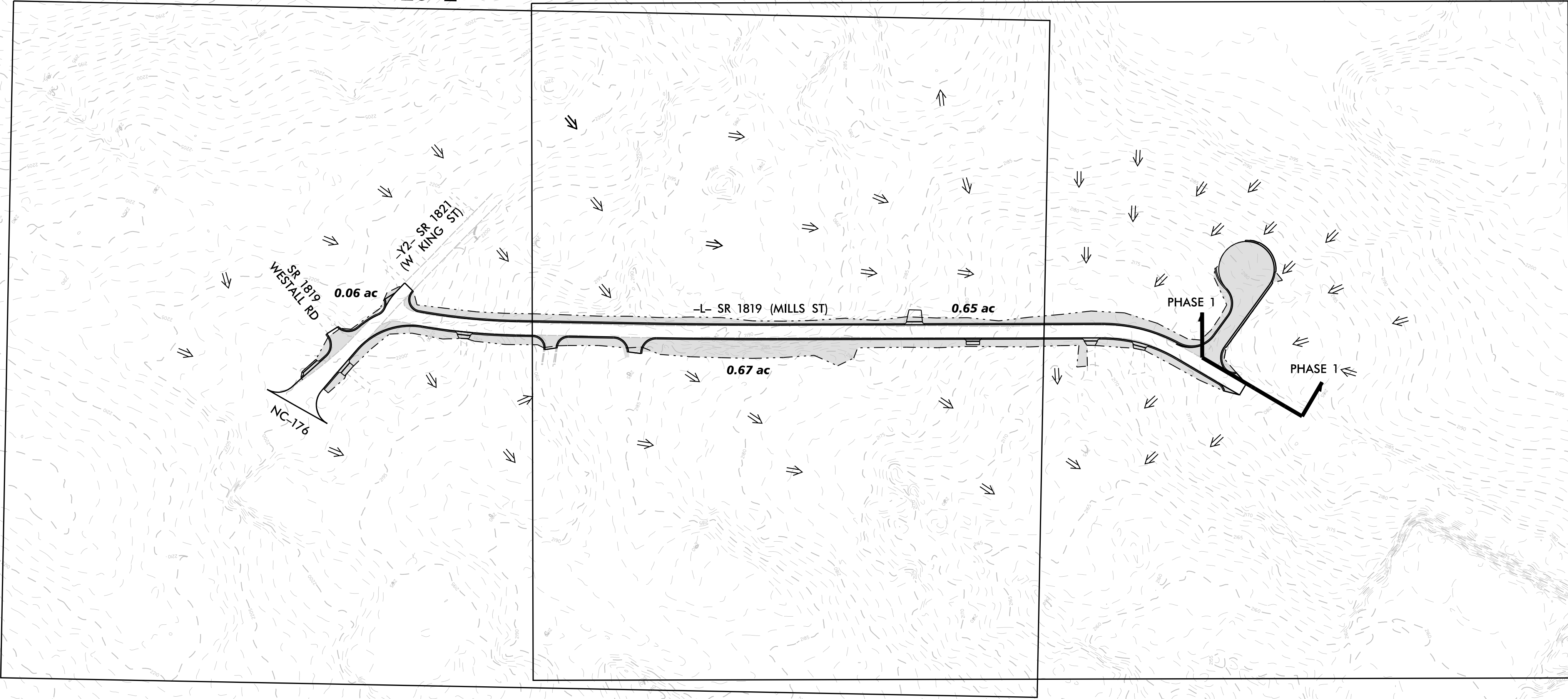
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NAD 8307

EC-2

EC-3



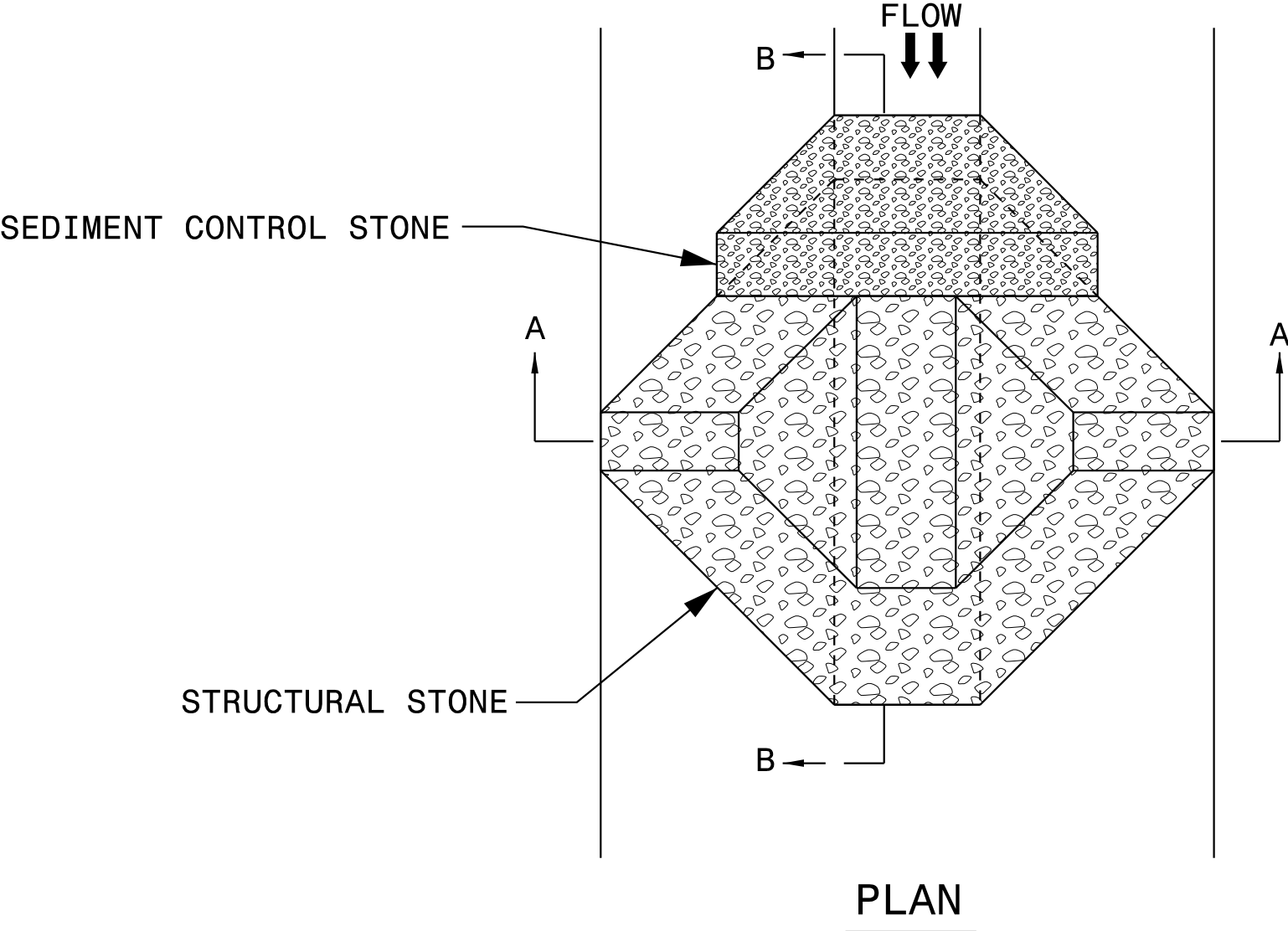
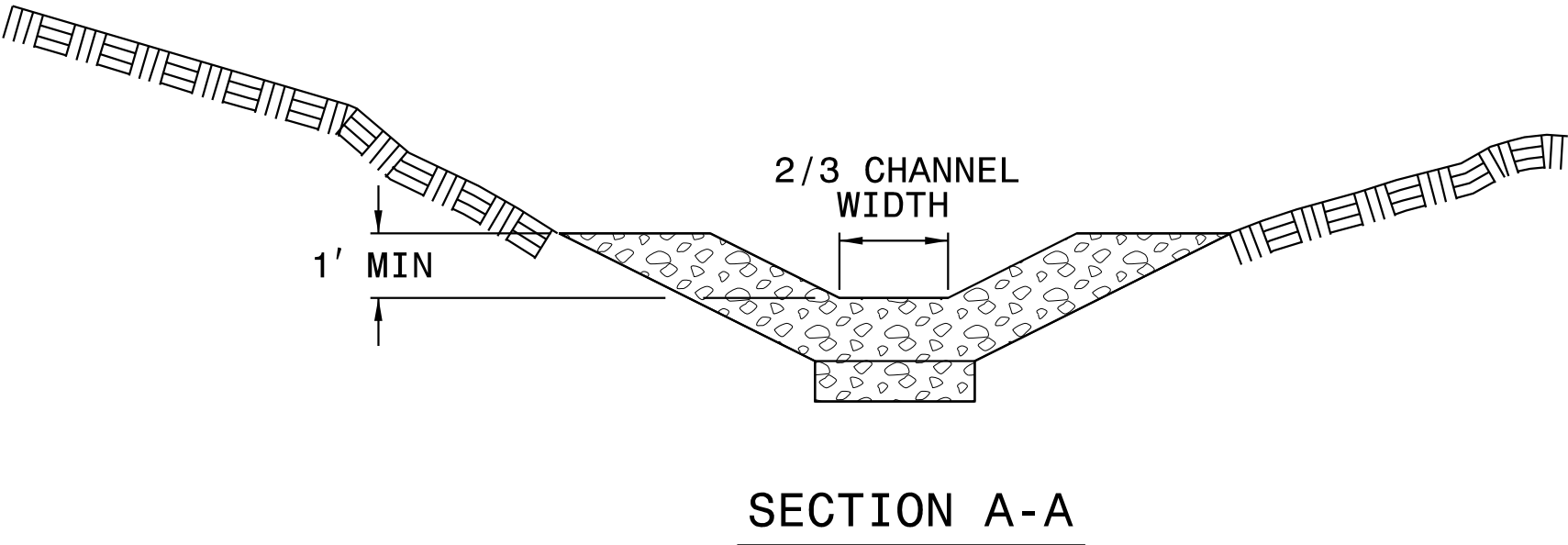
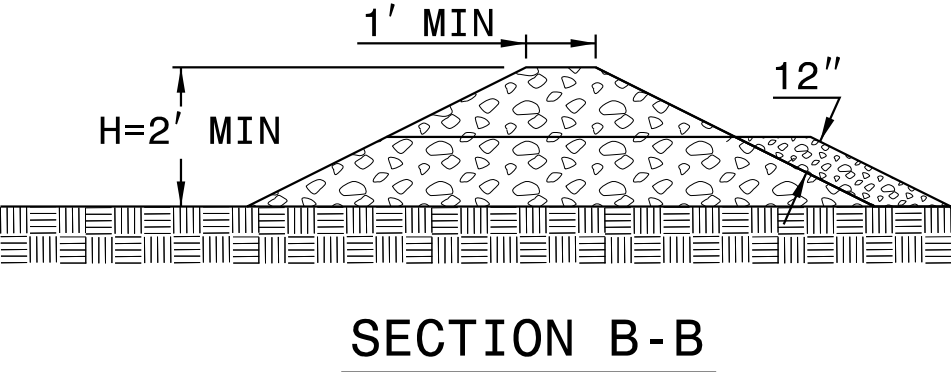
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PROJECT REFERENCE NO.	SHEET NO.
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STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.	<div><p>SEDIMENT CONTROL STONE</p><p>STRUCTURAL STONE</p><p>PLAN</p></div> <div><p>NOTES</p><p>USE CLASS 'B' EROSION CONTROL STONE FOR STRUCTURAL STONE.</p><p>USE NO. 5 OR NO. 57 STONE FOR SEDIMENT CONTROL STONE.</p></div> <div><p>SECTION A-A</p></div> <div><p>SECTION B-B</p></div>	STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.
ENGLISH STANDARD DRAWING FOR TEMPORARY ROCK SILT CHECK TYPE 'A'	ENGLISH STANDARD DRAWING FOR TEMPORARY ROCK SILT CHECK TYPE 'A'	STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.
SHEET 1 OF 1 1633.01		SHEET 1 OF 1 1633.01

NC GRID
NAD 83 95

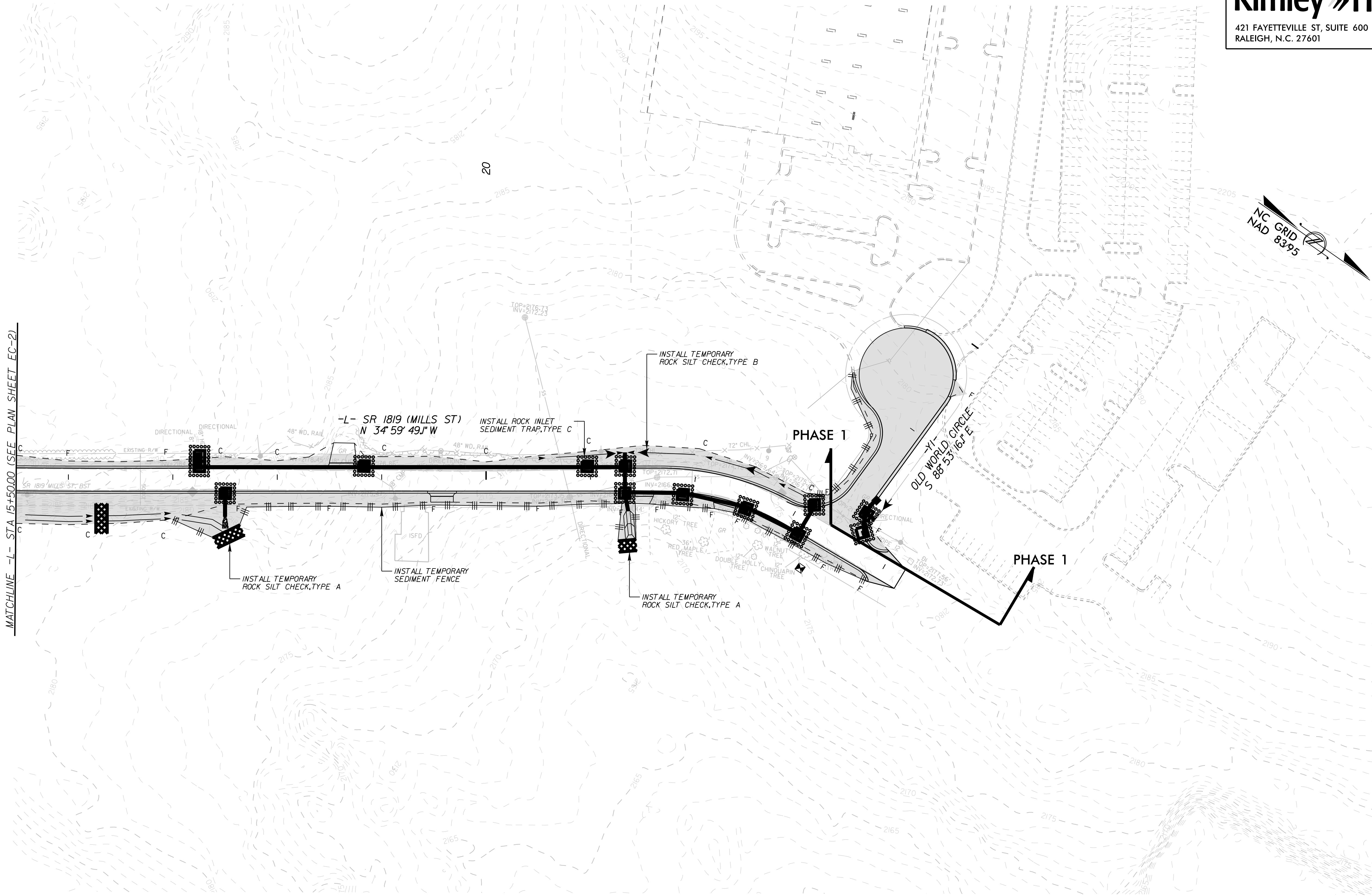
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PROJECT REFERENCE NO.
011036406

SHEET NO.
EC-3

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421 FAYETTEVILLE ST, SUITE 600
RALEIGH, N.C. 27601



6/1/2018

LEGEND			
CONSTRUCTION LIMIT	C --- F	LIMITS OF DISTURBANCE (SHADED)	
TEMPORARY SILT FENCE		ROCK INLET SEDIMENT TRAP, TYPE C	
ROCK SILT CHECK, TYPE B		TEMPORARY ROCK SILT CHECK, TYPE A	

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4/24/2018

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

HENDERSON COUNTY

LOCATION: FROM THE INTERSECTION OF WEST KING STREET AND
NC 176 TO APPROX. 1600’ NORTH TO OLD WORLD CIRCLE
ON SR 1819 (MILLS STREET)

ROADWAY STANDARD DRAWING

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" -
PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C.,
DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE
CONSIDERED A PART OF THESE PLANS:

<u>STD. NO.</u>	<u>TITLE</u>
901.50	ARROWS AND SHIELDS
901.70	SIGN STRINGERS AND SUPPORT SPACING
903.10	GROUND MOUNTED SIGN SUPPORTS (EXCEPT FOR SHEET 1 OF 3 WHICH IS REPLACED WITH SIGN-1A AND SHEET 2 OF 3 WHICH IS REPLACED WITH SIGN-1B IN PLANS)
904.10	ORIENTATION OF GROUND MOUNTED SIGNS
904.50	MOUNTING OF TYPE 'D', 'E' AND 'F' SIGNS ON 'U' CHANNEL POSTS

GENERAL NOTES

- WHEN NOT STATIONED OR DIMENSIONED ON PLANS, ALL 'E' SIGNS SHALL BE FIELD LOCATED BY THE ENGINEER.
- WHEN EXISTING SIGNS ARE REMOVED AND INSTALLED ON NEW SUPPORTS, THE RE-ERECTION SHALL IMMEDIATELY FOLLOW THE REMOVAL.
- THE BACKGROUND FOR TYPE E & F SIGNS SHALL BE TYPE C REFLECTIVE SHEETING.
- SEE ROADWAY PLANS FOR GUARD/GUIDE RAIL DETAILS.
- NCDOT TO PROVIDE SIGNS TO CONTRACTOR
- CONTRACTOR TO COORDINATE INSTALLATION WITH NCDOT. CONTRACTOR TO PROVIDE 3 WEEKS NOTICE TO NCDOT BEFORE INSTALLATION TO BEGIN.

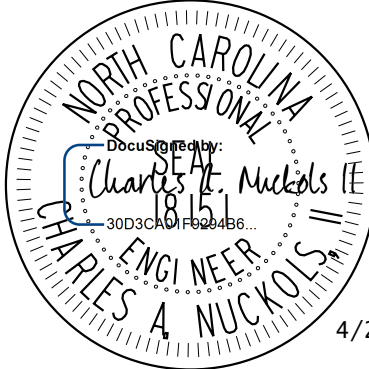
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<u>SHEET NO.</u>	<u>DESCRIPTION</u>
SIGN-1	TITLE SHEET
SIGN-2	N/A
SIGN-3	TYPE "E" SHEET
SIGN-4 THRU SIGN-5	SIGNING PLAN SHEETS

PLAN PREPARED BY: KIMLEY-HORN AND ASSOCIATES, INC.

Charles A. Nuckols P.E.	PROJECT DESIGN ENGINEER
Caleb D. Lowman E.I.	DESIGNER

Kimley»Horn

PROJECT REFERENCE NO.	SHEET NO.
011036406	SIGN -1
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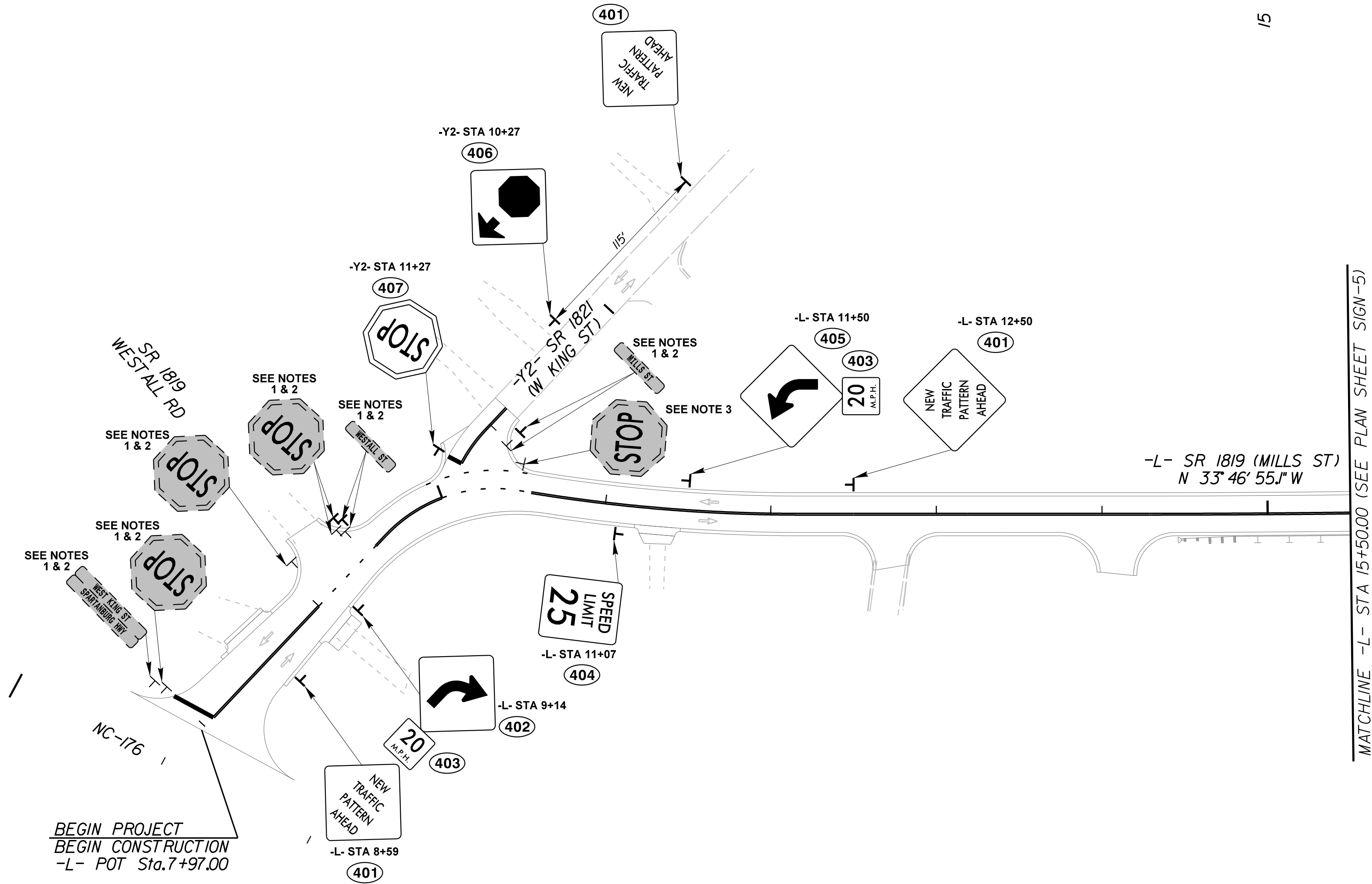
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4/24/2018

 DENOTES EXISTING SIGN

-  DENOTES NEW "U" CHANNEL POST / PROPOSED SIGN LOCATION
-  DENOTES EXISTING "U" CHANNEL POST / EXISTING SIGN LOCATION

PAY ITEM NOTES:
1. REMOVE AND DISPOSE OF EXISTING "U" CHANNEL POST
2. ERECT EXISTING SIGN ON NEW "U" CHANNEL POST
3. REMOVE AND DISPOSE OF EXISTING SIGNS AND "U" CHANNEL POST



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RIGHT-OF-WAY REV.

CONST. REV.

PROJECT REFERENCE NO.

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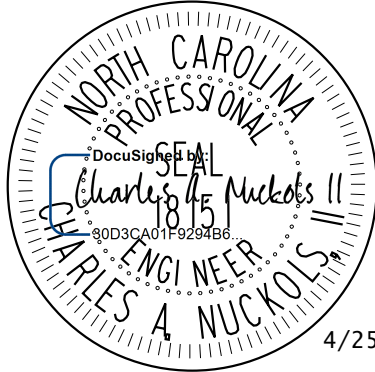
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SIGN-4

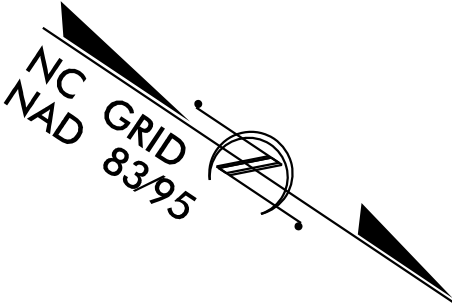
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4/24/2018

 DENOTES EXISTING SIGN

-  DENOTES NEW "U" CHANNEL POST/PROPOSED SIGN LOCATION
-  DENOTES EXISTING "U" CHANNEL POST/EXISTING SIGN LOCATION

PAY ITEM NOTES:
1.REMOVE AND DISPOSE OF EXISTING "U" CHANNEL POST
2.ERECT EXISTING SIGN ON NEW "U" CHANNEL POST
3.REMOVE AND DISPOSE OF EXISTING SIGNS AND "U" CHANNEL POST

MATCHLINE -L- STA 15+50.00 (SEE PLAN SHEET SIGN-4)

SEE NOTES
1 & 2
SAPLING DR
-L- STA 18+45
407
STOP
-L- SR 1819 (MILLS ST)
N 34° 59' 49.1" W

20

PHASE 1
-Y1- STA 12+00
407
STOP
SPEED LIMIT 25
404
-L- STA 23+80
PHASE 1
408
REDUCED SPEED AHEAD
END PROJECT
END CONSTRUCTION
-L- POT Sta. 24+19.00

BEGIN CONSTRUCTION
-Y1- POT Sta. 10+16.18

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RALEIGH, N.C. 27601

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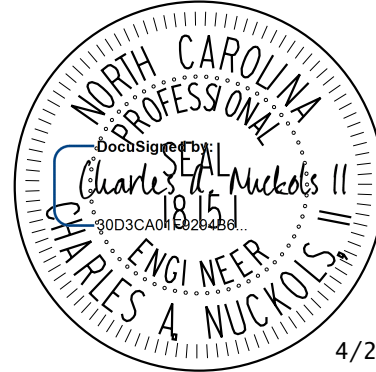
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SIGN-5

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